Observable Trends Based on the Data for PyCitySchools

Spending Ranges (Per Student)	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
(0, 585]	83.455399	83.933814	93.460096	96.610877	90.369459
(585, 630]	81.899826	83.155286	87.133538	92.718205	81.418596
(630, 645]	78.518855	81.624473	73.484209	84.391793	62.857656
(645, 680]	76.997210	81.027843	66.164813	81.133951	53.526855

In terms of passing rates, schools with higher spending per student also tend to have higher percentages of students passing both math and reading, as well as a higher overall passing rate. This suggests that schools with more resources may be better equipped to provide a high-quality education to their students.

However, it's worth noting that the relationship between spending per student and academic performance is not always straightforward. While schools in the top spending range have the highest passing rates, schools in the second spending range (spending between $585 and $630 per student) actually have a higher overall passing rate than schools in the third spending range (spending between $630 and $645 per student), despite having lower average scores in both math and reading.

Overall, the data showing that spending per student can have a significant impact on academic performance and student success, but it's important to consider other factors as well, such as teacher quality and curriculum.

School Size	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
Small (<1000)	83.821598	83.929843	93.550225	96.099437	89.883853
Medium (1000-2000)	83.374684	83.864438	93.599695	96.790680	90.621535
Large (2000-5000)	77.746417	81.344493	69.963361	82.766634	58.286003

The data shows that smaller schools, with less than 1000 students, have higher average scores in both math and reading compared to medium and large schools. This could be due to a number of reasons, such as smaller class sizes and more individualized attention for students.

Smaller schools also seem to have higher percentages of students passing both math and reading, as well as a higher overall passing rate. This indicates that students in smaller schools are more likely to perform well academically and graduate on time.

On the other hand, larger schools with more than 2000 students have the lowest average math score and the lowest overall passing rate. While they have a relatively high percentage of students passing reading, they have the lowest percentage of students passing math, suggesting that math may be a particularly challenging subject for students in larger schools.

Overall, the data shows that school size may have a significant impact on academic performance and student success. Schools that are smaller in size may provide a more supportive and personalized learning environment for students.